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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,375	08/15/2001	Indermohan S. Monga	14986BAUS01U	9204

34845 7590 07/05/2006

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EXAMINER

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ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/930,375	Applicant(s) MONGA ET AL.	
	Examiner Ashok B. Patel	Art Unit 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-38 are subject to examination. Claim 13 has been cancelled.

Response to Arguments

2. Applicant's arguments filed 04/03/2006 have been fully considered but they are not persuasive for the following reasons:

Claims 1-11:

Applicant's argument:

1. Weldon neither describes nor suggests an optical switched router

Claim 1 is directed at optical switched router. Weldon neither describes nor suggests an optical switched router. In particular, Figure 4 of Weldon illustrates several components in a probing router; but does not show or suggest optical technology. For at least this reason, the rejection under 35 U.S.C. j 102 is improper and should be withdrawn.

Examiner's response:

Weldon teaches at col. 5, line 5-12, "FIG. 2 is a block diagram of a VPN and supporting components according to the present invention. Data from a terminal (i.e., data source) node at a source LAN 210 is sent by way of a source VPN probing router 207 through a network 217, which may be the Internet or another shared network, to a destination VPN probing router 203 (sometimes referred to as "PR") and finally to a destination LAN 208." Thus element 207 of Fig. 2 is a router.

Further, Weldon teaches at col. 5, line 12-19 in conjunction of element 217 of Fig. 2, "The network 217 is a shared resource such as the Internet. However other types of networks may be used that employ TCP/IP, or a related packet switched

Art Unit: 2154

protocol such as IP version 4 or IP version 6. The physical medium in the network 217 may be made of any combination of terrestrial ground lines, optical lines, or wireless links that will form the in-band channel 204 or other channel paths 206 for example."

Thus, since the element 207, which is a router, is interfacing to optical lines, it is an optical router.

Furthermore, Weldon teaches at col. 5, line 19-34, "Various nodes are hosted in the network 217 that may be configured to become part of the VPN, as will be discussed. These nodes are served by routers 205 and 209 for example. For convenience, lines 204 are shown with a darker line indicating that this is the path through which the source LAN 210 and destination LAN 208 communicate with one another in a first scenario. Dynamic routing tables in the routers 209 and 205 dictate the path to be followed by the message traffic (whether encapsulated or not), where the chosen path is affected by the source/destination pair included in the message traffic header."

Thus, since the element 207, which is a router, is interfacing to optical lines through any subsequent router (chosen path is affected by the source/destination pair, it is an optical switched router.

Applicant's argument:

2. Weldon neither describes nor suggests optical service logic such as that claimed
Claim I recites "...optical service logic at the optical switched router, coupled to the UNI and the peer-to-peer interface, for managing connections in the optical communication network in accordance with said SLA for the user..." No such structure is shown or

Art Unit: 2154

suggested by Weldon.

Examiner's response:

Weldon provides "the optical switched router (please see above for the optical switched router), coupled to the UNI (Fig. 2, element 207 is interfacing with the optical lines which is as claimed "a user-to-network interface (UNI) for interfacing the user at the optical switched router with the optical communication network"; and the peer-to-peer interface" (Fig. 2, element 207 is interfacing with the routers 205, 209 and 203 (users).

Weldon provides "optical service logic at the optical switched router" (Fig. 4, element 407, col. 5, line 34-37, "As a consequence, the SLA statistics will be determined from in-band channel measurements since the probe message traverses the same path as the data packets.", and in col. 5, line 45-55, "In addition, the router includes program memory that holds therein instructions that are executed by a processor to form a probe mechanism that, at programmable time intervals, generates a packet data unit (a probe message) for transmitting through the in-band channel 204 to the destination router 203. The probe message includes a time stamp that indicates the time at which the source VPN probing router 207 actually sends the message over the in-band channel 204 to the destination VPN router 203. Alternatively, the time stamp is stored and retained by the VPN probing router 207."

Claims 12 and 13-23:

Applicant's argument:

“Accordingly, as in claim 1, claim 12 is directed towards an optical switched router, wherein the router includes service logic for managing connections. As described above with regard to claim 1, such limitations are neither shown nor suggested by Weldon.”

Examiner’s response:

Please refer to the above explanation for claim 1. Weldon teaches “service logic for managing connections” at col. 5, line 34-37, “As a consequence, the SLA statistics will be determined from in-band channel measurements since the probe message traverses the same path as the data packets.”

The above responses are applicable to the arguments presented for claims 24-34 and claims 35-38.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless-

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-12 and 14-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Weldon et al. (hereinafter Weldon) (US 6, 366, 563 B1)

Referring to claim 1,

Weldon teaches an optical service agent operating at an optical switched router for

Art Unit: 2154

managing a service level agreement (SLA) for a user in an optical communication network, the optical service agent (Fig. 2, element 207) comprising:

a user-to-network interface (UNI) for interfacing the user at the optical switched router with the optical communication network; (Fig. 4, element 415)

authentication logic for controlling access by the user to the UNI; (col. 9, line 21-26)

a peer-to-peer interface for interfacing with peer users; (col. 5, line 56-col. 6, line 11) and

optical service logic, coupled to the UNI and the peer-to-peer interface, for managing the optical communication network in accordance with said SLA for the user. (col. 6, line 29-53, col. 5, line 5-37)

Referring to claim 2,

Weldon teaches the optical service agent of claim 1, wherein the optical communication network comprises an automatically switched optical/transport network (ASON). and wherein the UNI comprises an ASON UNI. (col. 9, line 7-12," (26) The probing operations are performed on the network 217 at layer 3 i.e., Er layer). Thus, the operation is performed independent of the physical and data link layers and thus may be used in any one of a variety of different network configurations such as frame relay, ATM, FDDI, packet-over SONET, Ethernet, fiber channel as well as others.")

Referring to claim 3,

Art Unit: 2154

Weldon teaches the optical service agent of claim 1, wherein the optical service logic is operably coupled to monitor and analyze a connection in real-time for determining SLA compliance. (col. 4, line 16-34)

Referring to claim 4,

Weldon teaches the optical service agent of claim 1, wherein the optical service logic is operably coupled to gather and maintain statistical information relating to a connection. (col. 21-42)

Referring to claim 5,

Weldon teaches the optical service agent of claim 4, wherein the optical service logic is operably coupled to analyze the statistical information off-line for determining SLA compliance, patterns, and trends. (col. 11, line 21-42)

Referring to claim 6,

Weldon teaches the service agent of claim 1 wherein the optical service logic is operably coupled to interact with a service provider to enforce penalty provision in the SLA. (col. 11, line 21-42)

Referring to claim 7,

Weldon teaches the optical service agent of claim 1, wherein the optical service logic is operably coupled to interact with a service provider to negotiate a credit for services not provided by the service provider in accordance with the SLA. (col. 11, line 21-42)

Referring to claim 8,

Art Unit: 2154

Weldon teaches the optical service agent of claim 1, wherein the optical service logic is operably coupled to interact with a service provider to negotiate "replacement" service for a breach of the SLA. (col. 11, line 21-42)

Referring to claim 9 , 10 and 11,

Weldon teaches the optical service agent of claim 1, wherein the optical service logic is operably coupled to interact with various network elements to rectify a breach of the SLA, and wherein the optical service logic is operably coupled to interact with to interact with the service provider to dynamically modify the SLA based upon changing user requirements, and . wherein the optical service logic is operably coupled to interface with a billing/accounting system to provide SLA-related information. (col. 11, line 21-42)

Referring to claim 12,

Claim 12 is a claim to an optical router that incorporates the functionality of the optical service agent of claim 1. Therefore, claim 12 is rejected for the reasons set forth for claim 1.

Referring to claim 14,

Claim 14 is a claim to an optical router that incorporates the functionality of the optical service agent of claim 2. Therefore, claim 14 is rejected for the reasons set forth for claim 14.

Referring to claim 15,

Art Unit: 2154

Claim 15 is a claim to an optical router that incorporates the functionality of the optical service agent of claim 3. Therefore, claim 15 is rejected for the reasons set forth for claim 15.

Referring to claim 16,

Claim 16 is a claim to an optical router that incorporates the functionality of the optical service agent of claim 4. Therefore, claim 16 is rejected for the reasons set forth for claim 4.

Referring to claim 17,

Claim 17 is a claim to an optical router that incorporates the functionality of the optical service agent of claim 5. Therefore, claim 17 is rejected for the reasons set forth for claim 5.

Referring to claim 18,

Claim 18 is a claim to a device that incorporates the functionality of the optical service agent of claim 6. Therefore, claim 18 is rejected for the reasons set forth for claim 6.

Referring to claim 19,

Claim 19 is a claim to an optical router that incorporates the functionality of the optical service agent of claim 7. Therefore, claim 19 is rejected for the reasons set forth for claim 7.

Referring to claim 20,

Claim 20 is a claim to an optical router that incorporates the functionality of the optical service agent of claim 8. Therefore, claim 20 is rejected for the reasons set forth for claim 8.

Referring to claims 21, 22 and 23,

Claims 21, 22 and 23 are claims to an optical router that incorporates the functionality of the optical service agent of claims 9, 10 and 11. Therefore, claims 21, 22 and 23 are rejected for the reasons set forth for claims 9, 10 and 11.

Referring to claim 24,

Claim 24 is a claim to a system that incorporates the functionality of the optical service agent of claim 1. Therefore, claim 24 is rejected for the reasons set forth for claim 1.

Referring to claim 25,

Claim 25 is a claim to a system that incorporates the functionality of the optical service agent of claim 2. Therefore, claim 25 is rejected for the reasons set forth for claim 2.

Referring to claim 26,

Claim 26 is a claim to a system that incorporates the functionality of the optical service agent of claim 3. Therefore, claim 26 is rejected for the reasons set forth for claim 15.

Referring to claim 27,

Claim 27 is a claim to a system that incorporates the functionality of the optical service agent of claim 4. Therefore, claim 27 is rejected for the reasons set forth for claim 4.

Referring to claim 28,

Claim 28 is a claim to a system that incorporates the functionality of the optical service agent of claim 5. Therefore, claim 28 is rejected for the reasons set forth for claim 5.

Referring to claim 29,

Claim 29 is a claim to a system that incorporates the functionality of the optical service agent of claim 6. Therefore, claim 29 is rejected for the reasons set forth for claim 6.

Art Unit: 2154

Referring to claim 30,

Claim 30 is a claim to a system that incorporates the functionality of the optical service agent of claim 7. Therefore, claim 30 is rejected for the reasons set forth for claim 7.

Referring to claim 31,

Claim 31 is a claim to a system that incorporates the functionality of the optical service agent of claim 8. Therefore, claim 31 is rejected for the reasons set forth for claim 8.

Referring to claims 32, 33 and 34,

Claims 32, 33 and 34 are claims to a system that incorporates the functionality of the optical service agent of claims 9, 10 and 11. Therefore, claims 32, 33 and 34 are rejected for the reasons set forth for claims 9, 10 and 11.

Referring to claim 35,

Weldon teaches a method for managing service level agreements in an optical communication system at an optical switched router, the method comprising at least one of:

authenticating a request for communication services at a user-to-network interface (UNI) of the optical switched router. the request including a service level agreement (SLA);

monitoring and analyzing the connection in real-time for determining SLA compliance using a peer-to-peer interface of the optical-switched router; (col. 9, line 21-26)

gathering and maintaining statistical information relating to a connection;

Art Unit: 2154

analyzing statistical information off-line for determining SLA compliance, patterns, and trends;

interacting with a service provider via the peer-to-peer interface to enforce penalty provisions in the SLA;

interacting with a service provider via the peer to peer interface to negotiate a credit for services not provided by the service provider in accordance with the SLA;

interacting with a service provider via the peer-to-peer interface to negotiate "replacement" services for a breach of the SLA;

interacting with various network elements to rectify a breach of the SLA;

interacting with the service provider to dynamically modify the SLA based upon changing user requirements; and

interfacing with a billing/accounting system to provide SLA-related information.

(col. 11, line 21-42)

Referring to claim 36,

Weldon teaches the method of claims 35. wherein monitoring and analyzing a connection in real-time for determining SLA compliance comprises at least one of:

monitoring the integrity of the connection to verify that the connection meets certain SLA criteria;

monitoring traffic on the connection to verify that the connection meets certain SLA criteria;

querying a core optical communication network in order to obtain information compiled by the core optical communication network for verifying that the connection meets certain SLA criteria; and

querying in order to obtain information compiled by the peer users for verifying that the connection meets certain SLA criteria. (col. 11, line 21-42)

Referring to claim 37,

Weldon teaches the method of claim 35, wherein interacting with various network elements to rectify a breach of the SLA comprises at least one of:

re-requesting the connection; and notifying a service provider of the SLA breach; and orchestrating various network changes to resolve or work around the SIA breach.

Referring to claim 38,

Weldon teaches the method of claim 35, wherein interacting with the service provider to dynamically modify the SLA based upon changing user requirements comprises:

determining changing requirements of the user; and
dynamically re-negotiating the SLA to meet the changing requirements of the user. (col. 6, line 29-53)

Conclusion

Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses,

Art Unit: 2154

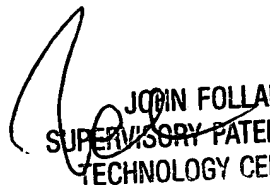
to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (571) 272-3972. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abp


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